

CLAIMS

1. A system for efficient uplink signaling to support closed loop capacity scheduling between a base station and a mobile station both of which carry out a plurality of data flows different in priority and QoS from one another,

the mobile station assigning an uplink capacity for the data flows in accordance with the steps of:

preparing combinations of capacities concerned with combinations of the data flows;

modifying the combinations of the capacities into modified combinations of capacities; and

determining the uplink capacity on the basis of the modified combinations of capacities.

2. A system as claimed in claim 1, wherein the modifying step comprises the steps of:

dividing the flows with reference to the priority and QoS into a plurality of groups; and

individually pointing the plurality of groups by sub pointers to obtain the modified combinations of capacities.

3. A system as claimed in claim 2, wherein the dividing step is divided into a first group of a high priority and a second group of a low priority.

4. A system as claimed in claim 3, wherein the steps further comprises the step of :

transmitting the representatives of the sub pointers by arranging them within a capacity request frame.

5. A system as claimed in claim 4, wherein the transmitting step comprises the step of:

periodically arranging the representatives of the sub pointers within the capacity request frame.

6. A system as claimed in claim 5, wherein the transmitting step comprises the step of:

a periodically arranging flow identifiers together with the representatives of the sub pointers within the capacity request frame.

7. A system as claimed in claim 2, further comprising the step of changing values indicated by the sub pointers based on capacity assignment information of which the base station informs the mobile station.

8. A method for efficient uplink signaling to support closed loop capacity scheduling between a base station and a mobile station both of which carry out a plurality of data flows different in priority and QoS from one another, the method comprising the steps of:

preparing, in the mobile station, combinations of capacities concerned with combinations of the data flows;

modifying, in the mobile station, the combinations of the capacities into modified combinations of capacities; and

determining an uplink capacity on the basis of the modified combinations of capacities in the mobile station.

9. A method as claimed in claim 8, wherein the modifying step comprises the steps of:

dividing the flows with reference to the priority and QoS into a plurality of groups; and

individually pointing the plurality of groups by sub pointers to obtain the modified combinations of capacities.

10. A method as claimed in claim 9, wherein the dividing step is divided into a first group of a high priority and a second group of a low priority.

11. A method as claimed in claim 10, wherein the steps further comprises the step of :

transmitting the representatives of the sub pointers by arranging them within a capacity request frame.

12. A system as claimed in claim 9, further comprising the step of changing values indicated by the sub pointers based on capacity assignment information of which the base station informs the mobile station.

13. A mobile station for transmitting a plurality of data flows different in priority and QoS from one another, comprising:

receiving means for receiving a capacity assignment message related to combinations of capacities concerned with the data flows;

modifying means for modifying the combinations of capacities into modified combinations of capacities; and

transmitting means for transmitting a capacity request message related to the modified combinations of capacities in the form of a capacity request message frame.

14. A mobile station as claimed in claim 13, wherein the capacity request message frame includes two different choices of frames.

15. A base station co-operated with the mobile station claimed in claim 13 or 14, the base station comprising:

forming means, responsive to the capacity request message, for forming a capacity assignment message including capacity assignment of the data flows; and

transmitting means for transmitting the capacity assignment message to the mobile station.